



BARK RIVER WATERSHED (LR13)



Deer Creek

This 186-square-mile watershed drains portions of Washington, Waukesha, and Jefferson counties and has many natural lakes, some of them large. About 47% of the area is in Waukesha County, 45% in Jefferson County and the remainder is in Washington County. Many of the watershed's lakes are experiencing heavy development pressure or have extensive development around them. While some wetlands have been drained or filled, a significant amount of wetland remains. The greatest threat to the basin's wetlands is rapid development in Waukesha County.

The watershed is about 44% agricultural, but significant rural subdivision development occurs in the Waukesha County portion of the watershed. Of the agricultural lands, about 7% have high soil erosion potential. Thus, agriculture use and rural development degrade local surface water quality. Livestock shoreline grazing is particularly troublesome in the towns of Cold Spring and Hebron. The town of Sullivan has the fifth highest soil loss rate in Jefferson County.

The Southeastern Wisconsin Regional Planning Commission (SEWRPC), in a staff report, recommends the Bark River Watershed in Waukesha and Washington Counties be considered a "high" priority for possible selection as a nonpoint source priority watershed project. The ranking reflects the threat of polluted runoff and the negative effects on many of the lakes in the Waukesha portion of the watershed. SEWRPC ranked its portion of the watershed's streams "medium." Of the 12 lakes larger than 100 acres in the watershed, one is oligotrophic, five are mesotrophic, one is considered eutrophic and five are considered very eutrophic (WDNR).



Bark River

The watershed has a high susceptibility to groundwater contamination. Because of the increasing amount of unsewered development around the many lakes in Waukesha County and the highly variable water levels in these lakes due to their groundwater-dominated characteristics, flooding of septic systems and subsequent contamination of private drinking water supplies is common. SEWRPC completed groundwater mapping for Waukesha County prior to 1991.

Table 1. Municipalities in the Bark River Watershed

Municipality	County	1995 Population	2000 Population	Percent Growth 1995 - 2000
Village of Hartland	Waukesha	7,585	7,905	4.2
Town of Delafield	Waukesha	6,809	7,820	14.8
City of Delafield	Waukesha	5,944	6,472	8.9
Town of Sullivan	Jefferson	2,022	2,124	5.0
Village of Dousman	Waukesha	1,471	1,584	7.7

Growth has occurred in this watershed's municipalities at moderate rates during the past five years, especially in the Town of Delafield. This watershed also includes the towns of Merton, Lisbon, Summit, Concord, Hebron and Cold Spring. Sewer service area plans have been prepared for the following municipalities in the Waukesha County portion of the watershed: Delafield-Nashotah (1993), Hartland (1985), and Dousman (1990). Each of these plans will likely undergo substantive revisions in the ensuing five years to accommodate this growth.



Bark River

STREAMS

Bark River The Bark River originates in Bark Lake in southern Washington County and flows southwesterly through Waukesha and Jefferson counties, joining the Rock River at Fort Atkinson. Stream water quality in the Bark River is generally poor, with conditions slightly better in the river's headwaters. There are five lakes and three impoundments on the river; three of these lakes are directly influenced by the river.

The Bark River is classified as a warm water sport fishery but is only partially meeting that use, primarily due to urban and rural polluted runoff entering the river and its tributaries. Most of the urban runoff pollution occurs in Waukesha County, where rapid development of urban and suburban "pockets" occurs along and between its many lakes.

The now-abandoned Hartland wastewater treatment plant discharged to the river upstream of Nagawicka Lake. Due to poor operation, it was identified as a major source of conventional pollutants to the river, which led to poor water quality. The old facility was replaced by the Delafield-Hartland wastewater treatment plant in 1980. A 1983 post-abandonment study indicates improved in-stream water quality conditions with reductions in ammonia, total and soluble phosphorus, biochemical oxygen demand loading, fecal coliform and streptococcus bacteria, in-stream sludge deposits, and plant biomass.



Central mudminnow

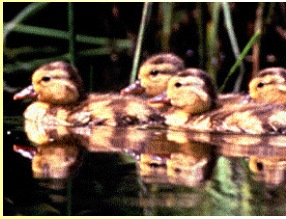
The Jefferson County portion of this river is a meandering, turbid, low-gradient stream with local flooding problems. The fishery consists of northern pike, channel catfish, panfish, and rough fish. Water quality has been degraded by polluted runoff from barnyards and farm fields and from hydrologic modifications such as ditching and straightening of tributary streams. Wetland drainage has also affected water quality. Significant wetlands exist adjacent to the Bark River in Jefferson County and some support spawning of game fish. A large state wildlife area at Prince's Point offers a variety of recreational activities.



Brown trout

Scuppernong Creek, a major tributary to the Bark River, rises at the edge of the moraines in central Waukesha County. The creek passes through rural areas much of its length, but subdivisions are developing rapidly in the upstream reach near Wales. Numerous drainage ditch inlets carry agricultural runoff to the stream. There are two impoundments on Scuppernong Creek. Historical records suggest the reach from the headwaters to Waterville Lake supported a viable trout population in the early part of this century. Excessive ditching of tributaries and wetlands and the construction of a dam at Waterville, altered stream habitat so it now supports a warm water sport fishery. From the Waterville dam downstream to Dutchman Lake the stream supports a Class I trout fishery

due to a large spring that augments flow and lowers stream temperature. Water quality from Dutchman Lake to the old Dousman Millpond is good. There are many springs and the reach supports a warm water sport fishery. Below the Dousman Millpond water quality is poor due to the large sediment load and a much lower gradient.



Ducklings

Wales Creek, a small tributary to Scuppernong Creek, is fed by an extensive system of springs; this stream may support a small population of trout.

Duck Creek flows from Goose Lake to the Bark River in eastern Jefferson County. Agricultural ditching of the stream and some of its tributaries has altered its hydrology. Though Duck Creek is a low gradient stream, it supports a diverse forage and sport fishery. More than 3,000 acres of wetland adjoin it, providing a significant buffer from polluted runoff except for an area west of Sullivan that was ditched and diverted from its original channel. A tributary to Duck Creek from the Sullivan wastewater treatment plant is currently listed as a variance water in NR 104.

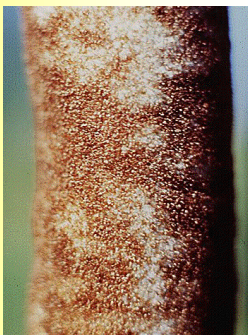
LAKES

Many small lakes and impoundments exist in the watershed. Many of the lakes suffer degraded water quality from lakeshore development, construction site erosion, failing septic systems, excess lawn waste, excess fertilizer applications, and agricultural runoff.

Amy Belle Lake is a small, fairly deep Washington County lake with a mean depth of 20 feet. It's a Class IA lake for phosphorus sensitivity and is mesotrophic. Purple loosestrife and Eurasian water milfoil have infested the lake and access is limited. The shoreline experiences development pressure from a ring of homes around its perimeter and a proposed additional subdivision on the lake's north and northwest shoreline. Despite these problems, the native vegetation is in good condition and the lake's water quality is considered very good. Volunteer monitoring is conducted at the lake, but more is needed. An aquatic plant survey should be conducted and the septic systems surrounding the lake should be examined for problems. A lakes program protection grant could provide the money to purchase the lake's remaining corridor on the north and northwest shoreline.

Applebecker Millpond is a small impoundment of the Bark River just downstream from Lake Nagawicka. This lake suffers water quality problems similar to other small impoundments in southern Wisconsin. It has poor water quality due to heavy sedimentation and nutrient loading.

Bark Lake is a fairly good-sized seepage lake in Washington County with 64 surface acres and a mean depth of 14 feet. A lake district has existed for some time but has been inactive. The lake is considered eutrophic and it exhibits sedimentation, septic problems, and severe development pressure. The lake was monitored in 1994. There is currently a moratorium on the development of new septic systems due to groundwater contamination and shallow soils; only holding tanks are allowed. Due to the many needs of this resource, the lake district should either become more involved in the lake or disband.



Cattail and close-up of seedhead



Panfish, such as the black crappie, can be found in these lakes

Dutchman Lake (Ladle), a 31-acre lake has no public access and no water quality information is available. The Lower Rock River Basin Team and/or SEWRPC should conduct a water chemistry and biology and vegetation inventory and assessment of the lake.

Upper Genesee Lake has been described as pristine, exclusive, and having excellent water quality. No motors are allowed on the lake and the boat access is carry-in only. The lake experiences water-level fluctuations due to its groundwater-dominated nature; it is hydraulically connected to Middle Genesee Lake. A Pabst Farm development north of Hwy 94 may be affecting the lake's water quality from wind erosion and deposition. A WDNR lakes planning grant could help fund a joint planning process to ensure sustainable development on that property, including ensuring maintained groundwater infiltration and stormwater management activities.

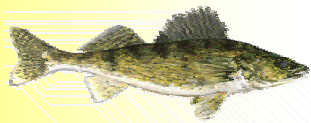
Middle Genesee Lake is hydraulically connected to the Upper Genesee Lake and exhibits similar lake level fluctuations. There are an estimated 53 homes on the lake that experience septic flooding problems, eight of which are in a recent subdivision. Development around the lake must account for the system's rapidly fluctuating water levels. The U.S. Geological Survey is studying the lake to manage for the high water levels. A Lakes Planning Grant could provide funds for a plan to incorporate the results of the USGS water level investigation. The planning grant could help identify specific septic system problems and potential wetland impacts from managing the lake's water level to avoid septic system flooding.



Water lily

Golden Lake is a spring-fed mesotrophic, or moderately productive, lake in Waukesha County that in the past supported a good warm water sport fishery. Nuisance aquatic weed growth has been a problem and water quality appears to have declined in the last few years due to agricultural runoff and ditching and drainage of nearby wetlands. The lake's north and south side have unsewered development. The lake has poor public access. Despite these problems, the lake supports outstanding wildlife habitat. WDNR has initiated the construction of a new public boat launch on Highway 18.

Hunters Lake has a Lake Association that conducts extended volunteer monitoring and has just finished a scoping study to establish public access. A developer that owned property on the lake gave that property to the lake association for the public access site. A Lakes Planning Grant could be used to study the lake's septic systems. A lakes protection grant could help fund development of a local ordinance for stormwater planning and erosion control protection. The lake exhibits good water quality; projected urban development in the Village of Dousman, upstream, will, however, negatively affect the lake without proper planning and controls.



Walleye: illustration and photo

Nagawicka Lake is a large mesotrophic drainage lake on the Bark River. The village of Delafield lies on the southwest edge of the lake and there is significant home and cottage development around the lake. The lake has a good Warm Water Sport Fishery and high recreational use. The lake's major issues are development pressures, lack of stormwater management, and shoreline disturbance. Nutrient and sediment loading from upstream, surrounding agricultural and urban runoff, and erosion from construction sites have affected the lake's quality. Septic systems in non-sewered areas may also be a problem, though almost the entire lake lies within a sewer service area. Applications to conduct



Purple loosestrife

dredging along the lake's west shore have been submitted. Recently, the city of Delafield purchased property along the lake to connect with the downtown corridor trail system. There are no lake association or Self-Help monitoring volunteers for this lake. A WDNR Lake Planning Grant could fund development of a long-term lake management plan for the lake, including determining the lake management institutional structure, such as developing a lake association, and protection strategies.

Upper Nashotah Lake, a high quality lake, has no lake management organization or volunteer monitoring. There are some conservancy areas around the lake's shoreline and dredging permit requests were made in 1995.

Lower Nashotah Lake is a Class IA lake and supports excellent water quality and low density housing along its shoreline. It's a marl lake that is part of the Bark River chain of lakes assessed by SEWRPC in 1993. Dredging permit requests have been submitted for work in the lake's lower bay south navigational channel. The lake may be affected by wind erosion and deposition of solids from the Pabst agricultural land-spreading site nearby. The lake is not sewered.



Eurasian watermilfoil

Upper Nemahbin Lake is a natural mesotrophic drainage lake on the Bark River. This lake also has a good warm water sports fishery and heavy recreational use. Water quality problems are due to nutrient and sediment loading from upstream; surrounding agricultural runoff; and urban runoff and erosion from construction sites. Septic systems in non-sewered areas may also be a water quality threat. The lake has good water clarity, though algae have been a problem in the past. Eurasian water milfoil, purple loosestrife and fluctuating water levels have also been problematic.

Lower Nemahbin Lake is a natural drainage, mesotrophic lake on the Bark River that supports a good warm water sport fishery. This partner lake to Upper Nemahbin also maintains Class IA water quality and experiences similar watershed pressures. Sediment and nutrient loads from upstream; surrounding septic systems; runoff from agricultural fields, lake homes and cottages; and runoff from the adjacent Interstate highway affect the lake's water quality. A Lakes Planning Grant could fund development of a watershed inventory of vegetation, as the lake's native vegetation of Chara and Vallisneria are likely affected by the non-native Eurasian water milfoil infesting the lake. There is also interest in developing sewer lines around this lake, which may protect the water quality during high flows.



*Largemouth bass:
illustration and photo*

Pretty Lake is a landlocked lake just west of the interlobate moraine in Waukesha County. The lake has had a good warm water sport fishery and high recreational use. The entire shoreline is heavily developed with homes and cottages. Water quality is generally good. Nearby wetlands have been ditched and drained, which may be affecting water quality. A potential for failing septic systems exists, adding to water quality problems. Fluctuating water levels are also a problem and the lake is regularly pumped to maintain lake levels. Septic systems around the lake have been replaced with mound systems. The U.S. Geological Survey conducted modeling of the lake's groundwater-driven system to determine what actions to take to maintain the system's functional values, while preventing septic flooding and nutrient contamination of the lake. The Lake District pays for the pumping and has received a high capacity well permit from the state.

Waterville Lake is an impoundment of Scuppernong Creek east of Dousman. It is a high recreational use lake with significant subdivision development around it. Water quality problems are due to runoff from agricultural lands and surrounding development. Failing septic systems and fluctuating water levels may be problems.



Slender madtom

Resources of Concern (LR13)

WDNR's *Heritage Resources Database* indicates that the following water-dependent endangered, threatened or special concern species and/or communities have been sighted in this watershed within the last 20 years.

Table 2. Endangered, Threatened or Species of Special Concern

Species Common Name	Latin Name	Habitat
Greater Redhorse	<i>Moxostoma valenciennesi</i>	Bark River - 1 fish 1976
Lake Chubsucker	<i>Erimyzon sucetta</i>	Bark River, Rome Millpond
Slender Madtom	<i>Noturus exilis</i>	Bark River
Blanding's Turtle	<i>Emydoidea blandingii</i>	NA



Greater redhorse

Table 3. Endangered, Threatened or Communities of Special Concern

Community	Location	Indicator Species/Description
Bird Rookery	Prince's Point	Great Blue Heron Rookery
Southern Mesic Forest	Trillium Woods, Rome Pond Wildlife Area	Gently sloping island adjoining south bank of Bark River, surrounded by open wetland, supports medium age mesic to dry mesic forest of sugar maple, red oak, white oak and basswood.
Wet-Mesic Prairie	Rome Pond Prairie	A small, degraded prairie located between two upland islands within a wetland of the Rome Pond Wildlife Area. The site is somewhat weedy but contains more than 30 prairie species. The area could use burning.
Open Bog	Henrietta Lake Bog	Sphagnum mat at end of groundwater-fed lake, with typical bog species. Far south end is dominated by leatherleaf, with a few trees and shrubs establishing near the middle; this part surrounded by typha marsh. Tamarack established-east side.
Lake-Hard Bog, Northern Wet Forest, Southern Sedge Meadow, Shrub Carr, Open Bog	Goose Lake Wetland	A large and diverse wetland complex on one of the few undrained black soil tracts in the county. Goose Lake contains a diversity of submerged and emergent aquatics and is surrounded by an extensive sedge meadow and shrub-carr. To the northeast is a large tract of tamarack-dominated wet forest and two small bog lakes surrounded by floating mats of vegetation. The area is relatively undisturbed and supports numerous wildlife species. Much of the tract has been invaded by purple loosestrife.
Bog Relict	Genesee Lake Road Bog	Acid bog/tamarack relict surrounding shallow lake. A number of "northern" species are present. In good shape except for influx of purple loosestrife.



Sugar maple: foliage and leaves



A bog pond and tamaracks

Open Bog, Southern Dry-Mesic Forest	Nagawicka Lake Bog and Oak Woods	Part of a high quality coniferous bog. Disturbances to the area appear minimal with some selective cutting along the lake edge. The coniferous bog has been designated a Natural Area of regional significance. Bogs located south of the tension zone in Wisconsin area rare.
Southern Dry-Mesic Forest	Nashotah Woods	Medium age woods of oaks and hickory. This nearly impenetrable shrub layer of honeysuckle and buckthorn. A large area, but much dissected by wide trails. Interior is very open. Many exotics.
Southern Dry Forest	Lapham Peak Woods	A xeric forest of white, red and burr oaks, shagbark hickory, black cherry. Uncommon rare forest interior songbirds documented.
Hardwood Swamp	Laura Lake Swamp	Large but disturbed mix of hardwood swamp, tamarack relict, dry mesic uplands, and shrub-carr. Also contains stream and developed lake.

RECOMMENDATIONS

The Southeastern Wisconsin Regional Planning Commission (SEWRPC) is the designated planning agency for the Waukesha and Washington counties portion of this watershed. Please consult SEWRPC Planning Report Number 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: An Update and Status Report, Memorandum Report No. 93 for additional water quality recommendations and information.



Hickory bud

1. The Lower Rock River Basin Team should evaluate the possibility of using the Stewardship Fund to acquire additional wetlands and areas for wetlands restoration in the vicinity of Goose Lake and the headwaters of Duck Creek and in the middle and lower reaches of Duck Creek in Jefferson County, and for stream buffers along Upper Koshkonong Creek in Dane County.¹
2. The Lower Rock River Basin Team should acquire wetlands and areas for wetlands restoration along two reaches of the Bark River in Jefferson County: above Rome Pond State Wildlife Area and between Prince's Point Wildlife Area and Whitewater Creek.¹
3. The Lower Rock River Basin Team should conduct a survey to determine the presence of trout in Wales Creek.¹
4. The Lower Rock River Basin Team should conduct a stream classification survey of Meadow Brook.¹
5. The Lower Rock River Basin Team and/or Southeast Wisconsin Regional Planning Commission (SEWRPC) staff should conduct water quality and sediment monitoring on the Bark River for nutrients, solids, and toxics.¹
6. The Lower Rock River Basin Team and/or SEWRPC staff should conduct baseline water quality monitoring on Bark, Hunters and Waterville lakes.¹



Burr oak

7. The Lower Rock River Basin Team should sample fish for mercury from Pretty Lake and additional fish monitoring for mercury in Nagawicka Lake.¹
8. The Bark River Watershed should be considered eligible for nonpoint source priority lakes cluster project selection.¹
9. The villages of Wales, Dousman, Hartland, Nashotah, and Delafield, with the assistance of SEWRPC, should enact and enforce construction site erosion control and stormwater management ordinances.²
10. Jefferson County Land Conservation Department staff should apply for and receive a WDNR lakes protection grant to protect wetlands around Cushman Lake.^{1, 2}
11. The lakes of the Bark River Watershed should be considered eligible for a priority watershed program lakes cluster project.¹
12. Citizens of Upper Genesee Lake should apply for a lakes protection grant to help fund a joint planning process to ensure sustainable development on the nearby Pabst Property, including the maintenance of groundwater infiltration and the implementation of stormwater management activities.²
13. The Amy Belle Lake Association should apply for a lakes program planning grant to conduct an aquatic plant survey to identify native and non-native species abundance, distribution and density and to develop a native vegetation management plan for Amy Belle Lake.^{1, 2}
14. The Amy Belle Lake Association should apply for a lakes program planning grant to examine the septic systems surrounding Amy Belle Lake to ensure that there are no leaks or other problems.^{1, 2}
15. The Amy Belle Lake Association should apply for a lakes program protection grant to purchase the lake's remaining undeveloped corridor on Amy Belle Lake's north and northwest shoreline.^{1, 2}
16. The Bark Lake District should either become more involved in the lake or disband.²
17. The Lower Rock River Basin Team and/or SEWRPC should conduct a water chemistry and biology and vegetation inventory and assessment of Dutchman Lake in Waukesha County.¹
18. Middle Genesee Lake should receive a lakes planning grant to develop a plan that incorporates the results of the recent U.S. Geological Survey water level investigation; the planning grant would identify specific septic problems and potential wetland impacts from managing the lake's water level to avoid flooding the septic systems.^{1, 2}
19. The Hunter Lake Association should apply for a WDNR lakes planning grant to study Hunter Lake's septic systems.²



*Basswood canopy and
flower close-up*



A sunflower typically found in dry-mesic prairies

20. The Hunter Lake Association should apply for a WDNR lakes planning grant to fund development of a local ordinance for stormwater planning and erosion control protection for Hunter Lake, especially in light of projected development in the village of Dousman.²
21. The village and city of Delafield should apply for a WDNR lake planning grant to develop a long-term lake management plan for Nagawicka Lake, including determining the lake management institutional structure and protection strategies.^{1, 2}
22. The Lower Nemahbin Lake Association should apply for a WDNR lakes planning grant to fund a lake basin inventory of vegetation in and around Lower Nemahbin Lake.²
23. WDNR should evaluate the fishery in Upper Koshkonong Creek for possible impairment and include it on the 303(d) list of impaired streams.¹

1. These recommendations are a basis for work planning or other decisions, which must be approved by the appropriate DNR division administrator (the recommendations are a starting point for the work planning process).
2. These recommendations are advisory to the public, local governments, lake management organizations, and other groups or agencies. These recommendations are not binding. No statutory or codified requirements exist



Sundew: a carnivorous plant typically found in bogs

ACKNOWLEDGMENTS

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Photo credits: WDNR (all photos except the following); Mike Sorge (fish photos); Virgil Beck (fish illustrations); WI Extension/WDNR (purple loosestrife, milfoil); Virginia Kline's Vegetation of Wisconsin Collection (cattail, cattail close-up, sugar maple canopy, bog pictures, hickory bud, basswood canopy, sundew); Mike Clayton/WI State Herbarium (sugar maple and burr oak leaves); John H. Beaman/WI State Herbarium (basswood flower close-up); WI Water Resources Clip Art Collection (pond life).

REFERENCES

- 2 AquaTech. 1970. Survey of the Bark River for the determination of water quality. . AquaTech. Waukesha, Wisconsin.
- 3 AquaTech. 1971. Five-day survey of the Bark River in the area around the Hartland Sweage Treatment Plant for The Nagawicka Lake Improvement Association and the Nagawicka Lake Yacht Club. AquaTech. Waukesha, Wisconsin.
- 17 Fago, D. 1982. Historical Fisheries Database. Wisconsin Department of Natural Resources, South Central Region.
- 27 JCLCD. 1988. Jefferson County Soil Erosion Control Plan. Jefferson County Land Conservation Department.
- 38 Marshall, David. 1989. Triennial Standards Review of Duck Creek Tributary. Wisconsin Department of Natural Resources.



*A floating bog mat
with sedges,
sphagnum moss and
leatherleaf*

- 41 Matthiae, P. E. 1970. A limnological survey of Scuppernong Creek, Waukesha County, Wisconsin. Class Report. Advanced Limnology Seminar.
- 49 Poff, R. J. and C.W. Threinen. 1963. Surface Water Resources of Washington County. Wisconsin Department of Natural Resources.
- 50 Poff, R. J. and C.W. Threinen. 1963. Surface Water Resources of Waukesha County. Wisconsin Department of Natural Resources.
- 47 Poff, R. J. and C.W. Threinen. 1961. Surface Water Resources of Jefferson County. Wisconsin Department of Natural Resources.
- 59 SWRPC. 1990. Assessment and Ranking of Watersheds for Nonpoint Source Management Purposes in Southeastern Wisconsin. Southeastern Wisconsin Regional Planning Commission.
- 60 SWRPC. 1995. Regional Water Quality Management Plan for Southeastern Wisconsin: A Status and Update Report Planning Report. Southeastern Wisconsin Regional Planning Commission. Number 93.
- 78 WI DNR. Watershed Management files. South Central Region. Wisconsin Department of Natural Resources.
- 84 WI DNR. South Central and Southeast Region Files. Wisconsin Department of Natural Resources.
- 87 WI RPC. 1978. Water Quality of Lakes and Streams in Southeastern Wisconsin: 1964-1975, Technical Report Number 17, Southeastern Wisconsin Regional Planning Commission.

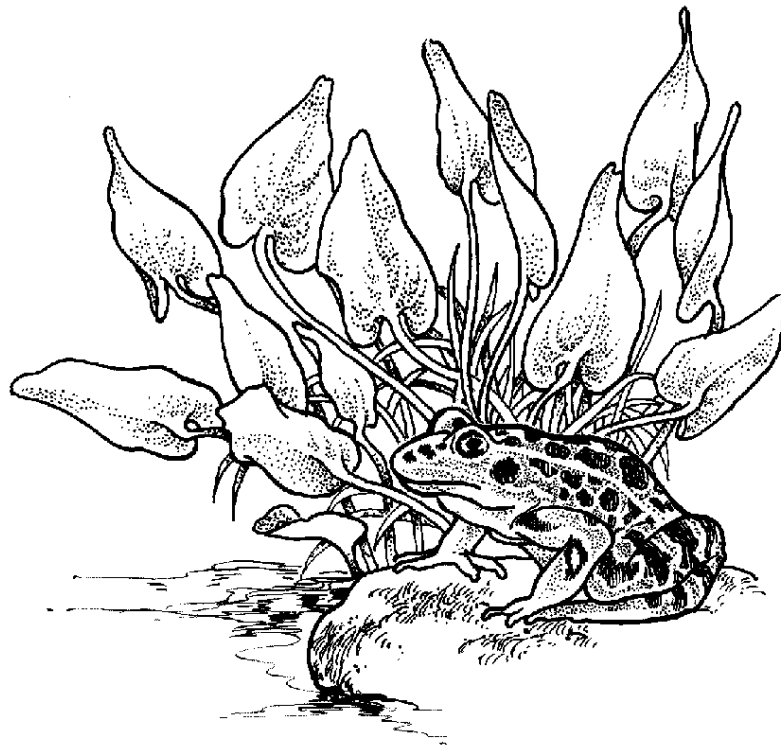


Table 4. Bark River Watershed (LR13)

Stream Name	WBIC	County	Length (Miles)	Existing Use (Miles)	Potential Use (Miles)	Supporting Potential Use (Miles)	Current Codified Use	303(d) Status	Use Impairment		Data Assessment	Data Level	Trend	References
									Source	Impact				
Bark River	0813500	Jefferson Waukesha	68	WWSF/68	Same	Part - Thr	WWSF*	Y	HM, PSB, BY, CL, URB, CE, PSM, DEV, NPS	FLOW, HAB, MIG, TURB, DO, NUT, SED, MAC, TEMP, ZM	E	B3 H2	S	2, 3, 17, 27, 49, 50, 47, 59, 60, 78, 84, 87
Deer Creek	0828700	Jefferson	0 - 2	WWSF/2	Same	Part	WWSF*	N	HM, NPS	FLOW, HAB, TURB, TEMP, DO	E	B3 H2	S	17, 27, 47, 59, 60, 87
			2 - 12	LFF/10	Same	Part	WWSF*	N						
Duck Creek	0823300	Jefferson	11	WWSF/11	Same	Part - Thr	85	N	HM, NPS, PSM, CL, BY	FLOW, HAB, TURB, DO, TEMP, MAC, NUT, SED, FKILL	M	B4 H4 C3	S	17, 27, 38, 47, 59, 60, 78, 84, 87
Scuppernong Creek	0825600	Waukesha	0 - 6	WWSF/6	Same	Full	WWSF*	N	HM, DEV, URB, SB, CE, NPS	FLOW, HAB, MIG, TEMP, DO, NUT, SED, MAC	E	B3 H2	D	41, 50, 84
			6 - 8	COLD/2	Same	Full								
			8 - 12	WWSF/4	COLD/4	Not								
Wales Creek	0826700	Waukesha	3.5	COLD/3.5	COLD/3.5	Not	WWSF*	N	HM, NMM, SB	SED	E	B3 H2	S	50
36 Unnamed Streams			64											

Table 5. Lakes of the Bark River Watershed (LR13)

Lake Name	County	Town, Range, Section	WBIC	Surface Area (Acres)	Max Depth (ft)	Mean Depth (ft)	Lake Type	Winter kill	Access	SH	Hg	Mac	LMO	TSI	TSI Class	Lake Plan Prot	P Sens	Impairment		Comments
																		Source	Impact	
Amy Belle Lake	Washington	T09NR19E S25	0774000	26	37	20	SE	N	PRI	C	GA	PLEM	ASSC	37*	ME	--	I A	URB, DEV	--	shoreline: developed ring of homes N, NW
Applebecker Millpond	Waukesha	T07NR18E S19	0827700	12	5	--	DG	Y	T	--	GA	--	--	--	--	--	II Ins	--	--	--
Bark Lake	Washington	T09NR19E S26	0828600	62	34	14	SP	N	X	--	GA	EM	X	--	EU	--	I A	ACC, DEV	SED	outlet dredged
Beaver Dam Lake	Waukesha	T05NR17E S26	0774300	36	6	--	DG	Y	X	--	GA	--	Y	--	EU	PLAN	--	--	--	Sedge marsh SW of Pretty Lake; waterfowl feeding and resting area
Buth Lake	Waukesha	T07NR17E S27	0774900	4	5	--	SE	--	--	--	GA	--	--	--	--	--	--	--	--	--
Crooked Lake	Waukesha	T07NR17E S23	0826800	58	16	--	DG	N	NAV	X	GA	EM	Y	47*	ME	--	II A	--	--	shoreline: little development; outstanding wildlife habitat
Cushman Pond	Jefferson	T06NR15E S24	0823900	48	7	--	--	Y	UNS	R	GA	--	--	--	--	--	II Ins	DEV	HAB	Acreage of pond fluctuates with flow
Duck Lake	Waukesha	T07NR17E S22	0775500	12	1	--	SE	--	--	--	GA	--	--	--	--	--	II Ins	--	--	--
Dutchman Lake	Waukesha	T06NR17E S02	0826400	31	43	27	SE	N	NAV	--	GA	EM	--	--	--	--	I A	HM, NPS, CL,	SED, NUT, ALG, MAC, HAB	rec: assessment of lake
Egg Lake	Waukesha	T07NR17E S23	0775600	2	3	--	SE	--	--	--	GA	--	--	--	--	--	--	NPS	NUT, ACC	--
Golden Lake	Waukesha	T07NR17E S30	0775900	250	46	--	SP	N	BR	C	GA	EM	ASSC	--	ME	--	I A	DEV, SEP	--	outstanding wildlife habitat; unsewered dev.
Goose Lake	Jefferson	T07NR16E S27	0823700	144	4	--	DG	Y	--	--	GA	--	--	--	--	--	II Ins	--	--	--
Green Isle Lake	Jefferson	T05NR15E S02	0823000	28	15	--	DG	Y	UNS	--	GA	--	--	--	--	--	II B	--	--	State Wildlife Area: wetlands

Lake Name	County	Town, Range, Section	WBIC	Surface Area (Acres)	Max Depth (ft)	Mean Depth (ft)	Lake Type	Winter kill	Access	SH	Hg	Mac	LMO	TSI	TSI Class	Lake Plan Prot	P Sens	Impairment		Comments
																		Source	Impact	
Henrietta Lake	Waukesha	T07NR17E S35	0776600	15	7	7	SP	--	BR	--	GA	EM	--	--	--	--	II Ins	--	--	--
Hunters Lake	Waukesha	T06NR17E S11	0826300	65	46	1	SP	N	NAV	C	GA	EM PL	ASSC	45***	ME	--	II A	DEV, ACC	HAB, SED, NUT	development in Dousman
Larkin Lake	Waukesha	T06NR17E S15	0777700	57	4	--	SP	--	--	--	GA	--	--	--	--	--	--	--	--	--
Lower Genesee Lake	Waukesha	T07NR17E S27	0778100	66	45	18	SP	N	BR	X	GA	EM	Y	--	ME	PROT	I A	WLF, AGSPR, DEV	--	--
Lower Nashotah Lake	Waukesha	T07NR17E S13	0827300	90	43	20	SP	N	BR	R	GA	ZM	ASSC	42*	ME	--	I A	DEV, AGSPR	SED	low density shoreline dev.; dredging requests for S. bay; wind erosion
Lower Nemahbin Lake	Waukesha	T07NR17E S24	0827000	271	36	10	DG	N	BR	C	GA	EM ZM	ASSC	38*	ME	--	I A	URB, DEV, NPS	--	--
Merton Millpond	Waukesha	T08NR18E S24	0828200	38	8	--	DG	N	T	--	GA	EM PL	--	--	EU	--	II A	DEV, URB, NPS	TURB, HAB	Merton area is developing quickly
Middle Genesee Lake	Waukesha	T07NR17E S22	0778300	109	40	8	SE	N	BR	R	GA	EM	DIST	--	ME	--	I A	WLF, AGSPR, DEV	--	clam population
Mud Lake	Washington	T09NR19E S25	0778800	5	10	3	SE	--	--	--	GA	--	--	--	--	--	--	--	--	--
Nagawicka Lake	Waukesha	T07NR18E S17	0828000	917	90	36	DG	N	BR	R	GA	EM PL ZM	Y	44*	ME	--	I A	DEV, URB, NPS	HAB, SED	outstanding wildlife habitat; LTTM
Pretty Lake	Waukesha	T06NR17E S28	0779300	64	35	--	SE	N	BR	--	GA	--	DIST	40*	ME	--	I A	WLF, DEV	--	pumping GW to maintain water level; USGS study
Reagon Lake	Waukesha	T06NR17E S22	0779400	16	10	5	SP	--	--	--	GA	--	--	--	--	--	I Ins	--	--	--
Rome Millpond	Jefferson	T06NR16E S17	0824400	446	7	2	DG	Y	UNS	--	GA	EM	X	52*	EU	--	II B	--	--	State Wildlife Area, excellent wetlands

Lake Name	County	Town, Range, Section	WBIC	Surface Area (Acres)	Max Depth (ft)	Mean Depth (ft)	Lake Type	Winter kill	Access	SH	Hg	Mac	LMO	TSI	TSI Class	Lake Plan Prot	P Sens	Impairment		Comments
																		Source	Impact	
Round Lake	Jefferson	T07NR16E S23	0779700	3	3	--	SE	--	--	--	GA	--	--	--	--	--	--	--	--	--
School Section Lake	Waukesha	T06NR17E S17	0825000	117	8	3	DG	N	BR	R	GA	EM PL	DIST	53*	ME	--	II A	HM, NPS	SED, MAC	milfoil problem; outstanding wildlife area
Scuppernong Creek Pond	Waukesha	T06NR17E S10	0826000	20	5	2	DG	--	R	--	GA	--	--	--	--	--	--	--	--	--
Slabtown Pond	Jefferson	T06NR16E S20	0824200	32	7	--	DG	N	--	--	GA	--	--	--	--	--	--	--	--	deep marsh/shallow pond; dam removed
Spahn Lake	Waukesha	T07NR17E S25	0779900	222	44	--	SE	--	T	--	GA	--	--	--	--	--	--	--	--	--
Spring Lake (Dousman Lake)	Waukesha	T06NR17E S30	0708100	14	8	--	SE	--	--	--	GA	EM	ASSC	--	--	--	--	--	--	--
Sybil Lake	Waukesha	T07NR17E S28	0780500	2	--	--	SE	--	--	--	GA	--	--	--	--	--	--	--	--	--
Upper Genesee Lake	Waukesha	T07NR17E S22	0788500	37	27	14	SP	N	NAV	--	GA	EM	Y	--	ME	--	I A	WLF, DEV, AGSPR	--	excellent WQ; GW dominated system; SEWRPC corridor study.
Upper Nashotah Lake	Waukesha	T07NR17E S12	0827500	133	53	21	SP	N	R	R	GA	--	--	46*	ME	--	I A	DEV	SED	excellent water quality; low density residential shoreline
Upper Nemahbin Lake	Waukesha	T07NR17E S24	0827100	283	61	30	DG	N	BR	C	GA	EM ZM	DIST	46***	ME	--	I A	--	--	good water quality; heavily used lake
Utica Lake	Waukesha	T06NR17E S04	0825800	14	25	14	SP	--	W	--	GA	EM	--	--	--	--	I Ins	--	--	--
Waterville Millpond	Waukesha	T07NR17E S36	0826600	68	12	4	DG	N	X	R	GA	EM	--	--	EU	--	II A	WLF, HM, DEV	ACC, NUT, TURB	good WWSF; ring of development around reservoir
Widgeon Lake (Bowron Lake)	Waukesha	T07NR17E S23	0774600	25	25	--	SP	N	--	--	GA	--	--	--	--	--	I A	--	--	--